

OResults of Radioactive Material Monitoring of Aquatic Organisms (Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J)

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: Samples collected>

Items	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
J-I	○	○	○	○	○	○

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: Site measurement item>

Items	Latitude and longitude of the location		Survey date and time			Water	Sediment				Other	
	Latitude	Longitude	Date	Time (water)	Time (sediment)	Water temperature (degrees C)	Sediment temperature (degrees C)	Property	Color	Contaminants	Water depth (m)	Secchi disk depth (m)
J-I(Surface layer)	37.4203°	140.1008°	2019/8/23	11:45	12:20	25.6	25.7	Sand	7.5Y 5/3	Shell fragments	4.2	>4.2
J-I(Bottom layer)												

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: General survey items/Analysis of radioactive materials Water>

Items	Latitude and longitude of the location		Survey date and time		pH	BOD (mg/L)	COD (mg/L)	DO (mg/L)	Electric conductivity (mS/m)	Salinity	TOC (mg/L)	SS (mg/L)	Turbidity (FNU)	Cs-134 (Bq/L)	Cs-137 (Bq/L)	Sr-90 (Bq/L)
	Latitude	Longitude	Date	Time (water)												
J-I(Surface layer)	37.4203°	140.1008°	2019/8/23	11:45	6.7	<0.5	1.8	7.9	11.5	0.06	1.0	<1	0.5	N.D.(0.0015)	0.0070	-
J-I(Bottom layer)					6.7	0.8	4.6	7.6	11.6	0.06	2.5	4	1.6	N.D.(0.0014)	0.0072	0.00093

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: General survey items/Analysis of radioactive materials Sediment>

Items	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NHE} (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm ³)	Grain size distribution								Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)	
	Gravel (2-75mm) (%)	Coarse sand (0.85-2mm) (%)	Medium sand (0.25-0.85mm) (%)	Fine sand (0.075-0.25mm) (%)							Silt (0.005-0.075mm) (%)	Clay (Less than 0.005mm) (%)	Median grain diameter (mm)	Maximum grain diameter (mm)								
Locations	Latitude	Longitude	Date	Time (sediment)																		
J-1	37.4203°	140.1008°	2019/8/23	12:20	7.3	383	26.5	2.0	3.7	2.677	0.4	3.3	58.9	36.0	1.4		0.30	4.8	18	250	0.23	

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: Analysis items Aquatic organisms>

Locations	Sampling point	Latitude and longitude of the location		Sampling date	Division	Class	Order	Family	Scientific name	English name	Population	Sample weight (kg-wet)	Note			Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137	
I-1 I-2 (north lakeside)	Within the lake and Nagase River	37.5047° 37.4995°	140.1143° 140.1409°	2019/8/26	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorfii	11	0.010	Immature fish	-	-	N.D.	N.D.(3.2)	N.D.(3.0)	-
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.14	-	-	-	5.46	0.46	5.0	-
J-1 (south lakeside)	Within the lake and around the Oninuma	37.4203°	140.1008°	2019/8/23	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.0092	-	-	-	N.D.	N.D.(3.8)	N.D.(3.6)	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	38	0.016	Juvenile,Imago	-	-	N.D.	N.D.(2.9)	N.D.(2.9)	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	15	0.10	Immature fish	-	-	9.61	0.71	8.9	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsariichthys platypus</i>	Pale chub	5	0.061	Immature fish,Mature fish	-	-	7.0	N.D.(1.2)	7.0	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsariichthys platypus</i>	Pale chub	23	0.22	Immature fish,Mature fish	-	-	3.8	N.D.(1.2)	3.8	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudogobio esocinus esocinus</i>	Pseudogobio esocinus esocinus	2	0.028	Immature fish	-	-	1.8	N.D.(1.8)	1.8	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorfii	10	2.7	Mature fish	Obscure digesta	Viscera removed	24.5	1.5	23	0.43
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	25	0.11	Immature fish,Mature fish	-	-	1.7	N.D.(0.85)	1.7	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	2	0.030	Immature fish	-	-	N.D.	N.D.(1.9)	N.D.(1.7)	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	3	0.12	Immature fish	Stenopsyche marmorata,Fish,Ephemeroptera(larva), Terrestrial insect,Spiders,Ant,Dytiscidae(larva)	Viscera removed	0.88	N.D.(0.72)	0.88	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	3	0.51	Immature fish	Japanese smelt,Common prawn	Viscera removed	21.6	1.6	20	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	1	0.076	Immature fish	Obscure digesta	Viscera removed	8.7	N.D.(0.80)	8.7	-
					Vertebrata	Osteichthyes	Perciformes	Actinopterygii	<i>Channa argus</i>	Snakehead	1	1.2	Mature fish	Empty stomach	Viscera removed	30.1	2.1	28	0.79
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Gymnogobius urotaenia</i>	Goby	115	0.42	Immature fish	-	-	2.3	N.D.(0.66)	2.3	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius kurodai</i>	Rhinogobius kurodai	381	0.21	Immature fish,Mature fish	-	-	1.4	N.D.(0.61)	1.4	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp.</i>	Rhinogobius									
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	3	0.54	Immature fish,Mature fish	Common prawn,Fish,Lyristes japonicus	Viscera removed	8.19	0.49	7.7	-
					Vertebrata	Amphibia	Anura	-	-	Frog	8	0.011	Larva(Tadpole)	-	-	3.5	N.D.(3.1)	3.5	-

*1: Organisms were collected in or around the targeted water areas.

*2: When multiple types of aquatic organisms were collected, a sample was prepared by mixing them.

*3: For a sample made of multiple types of aquatic organisms, the English name of the dominant one largest in number is underlined.

*4: Basically, measurement was conducted for all organism samples. Viscera (stomach and bowels) were removed for the measurement when possible so that undigested food and sediments, etc. in the digestive system would be excluded.

*5: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40μm-mesh).

*6: River bottom materials (incl. algae) are algae, etc. that were scratched off stones with a brush, etc. and may include very fine particles such as inorganic silt and clay.

*7: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

*8: Activity concentrations include counting errors, but the details are omitted here.